

Amendments to the Specification

Please amend the paragraph beginning at page 7, lines 4 to 23, as follows:

-- Accordingly, the present invention provides a polymer-based ammunition, comprising a composite material including a polymer matrix including at least one thermoplastic elastomeric polymer (TPE) component, and at least one soft elastomeric polymer component that at ambient temperatures is above its glass transition temperature; particles of a sufficiently high specific gravity material that are dispersed in the polymer matrix and present in an amount such that the composite material has a specific gravity [[of]] in a range from about 2 to 3 grams per cubic centimeter; and the composite material having a shape of a pre-selected projectile.

The composites thus prepared are subjected to a molding process, by which cylindrical bodies from the said composite, e.g. projectiles for firearms, etc., are manufactured by standard polymer processing techniques such as injection molding. The present invention also provides composite material, comprising: a polymer matrix including at least one thermoplastic elastomeric polymer (TPE) component, and at least one soft elastomeric polymer component that at ambient temperatures is above its glass transition temperature, the thermoplastic elastomeric polymer (TPE) component including a block copolymer having at least one elastomeric block, the material characterized in that it exhibits a dynamic mechanical compression creep below a threshold creep so that the composite material maintains its shape. --

Please amend the paragraph beginning at page 9, lines 5 to 10, as follows:

--As used herein, the term "soft elastomeric polymer" means a polymer that at ambient temperatures is above its glass transition temperature. In other words, this material is one which at ambient temperatures is a viscous material having an amorphous structure. It is this component of the polymer matrix which

is primarily responsible for the softness and high damping characteristics of the final composite. --

Please amend the paragraph beginning at page 13, lines 33 to page 14, line 20, as follows:

-- The high specific gravity weight material is present in the composite of the invention in particulate form and may be added to the polymer matrix during manufacture in the form of a powder or grains thereof. Small particles are preferred, for example having sizes in the range from about 71.4% of -100 to +325 U.S. Mesh and 23.2% of -325 U.S. Mesh, specific gravity and a density of 7.8 g/cm³. Within the above preferred criteria, therefore, any particulate high specific gravity density material may be used as this component of the composite of the invention. One particularly preferred example of such a material which has been found to be useful in the invention is iron powder, which is non-toxic and itself has a very high specific gravity density.

The choices of high specific gravity weight material metal powders include tungsten, copper, bismuth, iron and iron oxides. The Brinell Hardness for tungsten and copper is 2570 MNm⁻² and 874 MNm⁻², respectively, hence these may be too abrasive which may result in damage to the barrel of the gun in some applications. The Brinell Hardness of bismuth is 94.2 MNm⁻², but bismuth thus is expensive in comparison with iron. Iron oxide has a density of 5.24 g/cm³, which may not be high enough for some less lethal ammunition applications. Iron powder has a specific gravity density of 7.8 gm/cm³ and Brinell Hardness of 490 MNm⁻² which makes it the most preferred high specific gravity weight density material for use in the composites of the present invention. Therefore, while iron powder is preferred it will be understood other materials may be used as well. --